

#### Freeman Dodsworth

- 25 year Navy Veteran
- 2600+ flight hours
- 600+ hours in unmanned aircraft systems
- Director of Flight Operations for Contract UAS
  - One pound to 6000 pounds
  - All types of sensors
  - Rotary and fixed wing
- REM UAS
  - Consulting in the environmental, construction, educational and scientific fields

## BLUF......It's the Data, Silly!

- Technology advancements have made data acquisition and processing easier
  - Drone technology
  - Sensors
  - Command and Control
  - Processing
- The goal is to provide actionable data
  - Faster
  - Cheaper
  - More accurate
  - More applicable

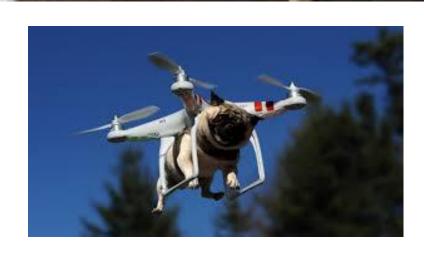
## Questions You Might Have

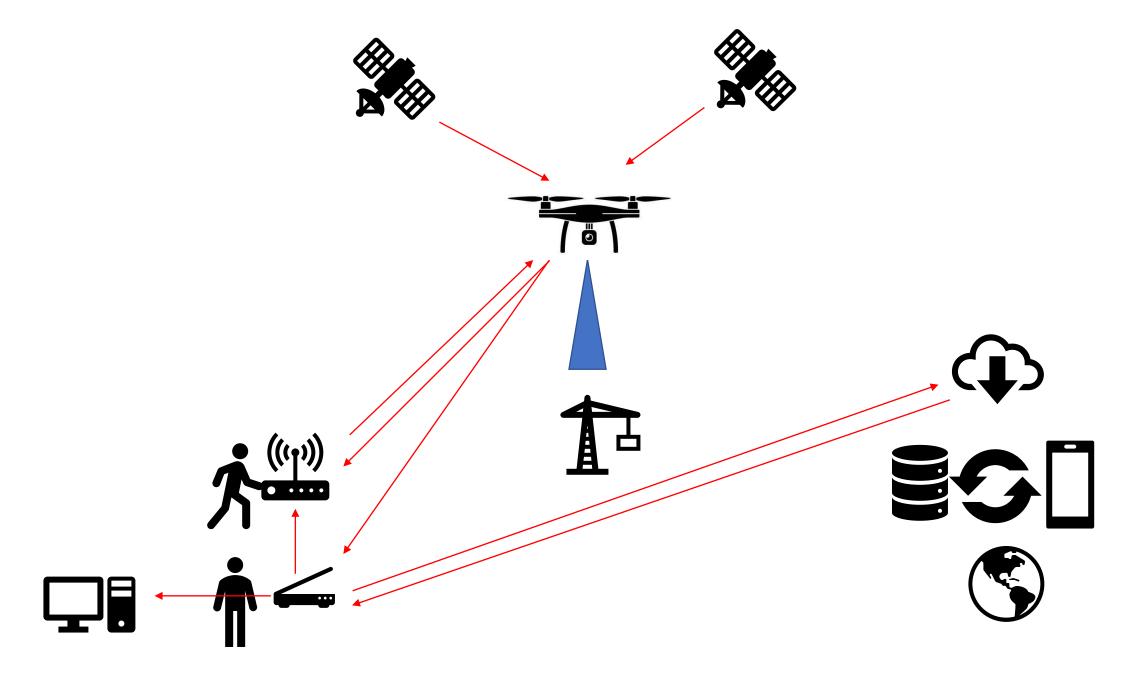
- What is the "new" capability?
- What are the applications?
- How can we use it?
- How can we get it?

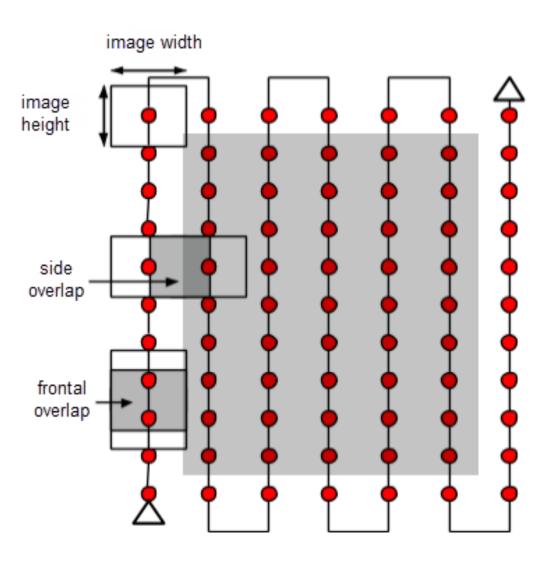




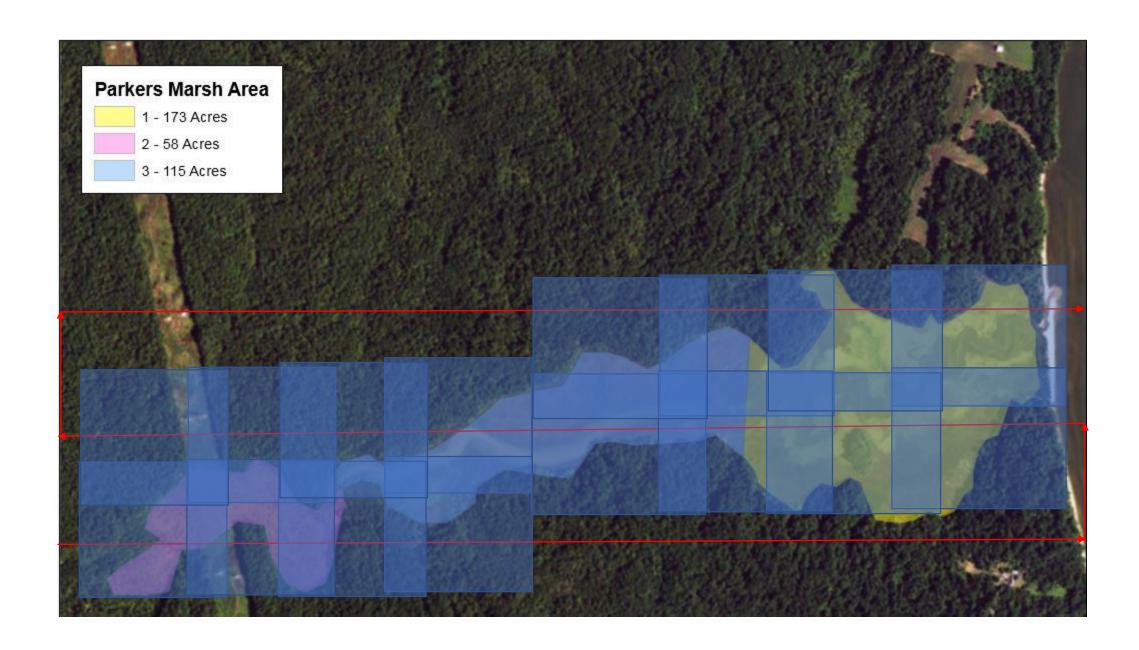








Area of interest















Location

Distance

Area

Volume

#### Title





Area

 $644 \, \text{m}^2$ 

Cut

 $507.8 \, \text{m}^3$ 

Fill

 $-23.1 \, \mathrm{m}^3$ 

Volume

 $484.7 \, \text{m}^3$ 

#### Base Plane

Best Fit

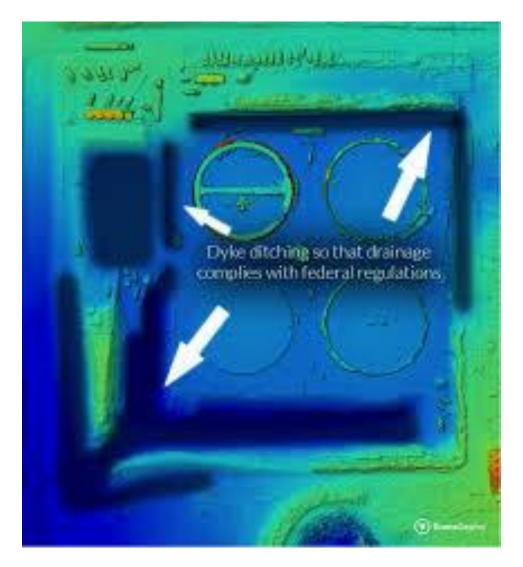


Have a conversation about this annotation with DroneDeploy users you share this map with.

Add a comment

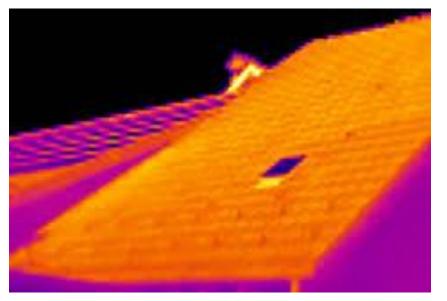






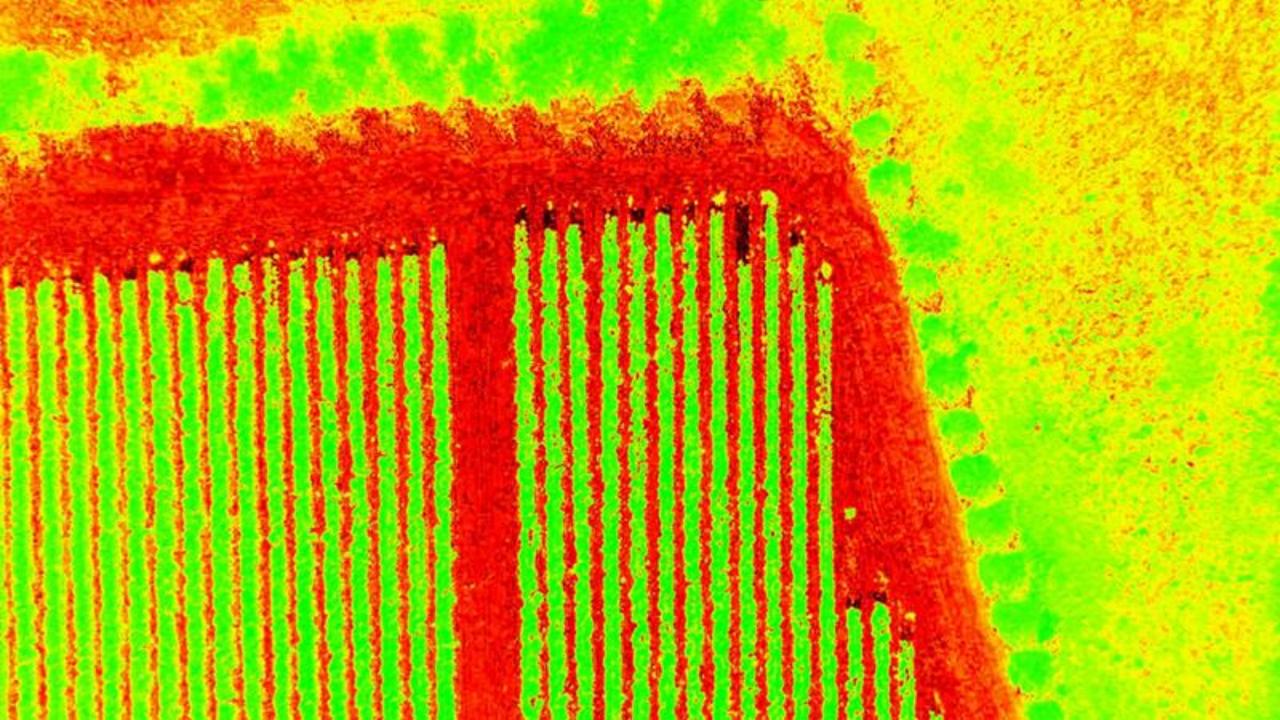












### LiDAR

#### Light Detection and Ranging

- Uses Laser pulses to map the surface of the earth
- Highly accurate
- Very versatile
  - Mapping
  - Volumetrics
  - Trend analysis
    - Slopes
    - Geologic
    - Structures

### Benefits

- Fast and accurate imagery/data
- GPS position to centimeters
- Trend analysis
- Creates a record for your use
- Creates a GIS record for ongoing use

# Challenges

- Regulations
  - Licensed operator
  - FAA regulations
    - Airspace
    - Clearance
    - Line of sight
- Cost
  - Per hour
  - Per project

# Options

- Hire a professional operator
  - Specify project requirements
  - Work priced based on contract statement of work
- Establish a drone program with the county
  - Train and qualify current employee(s) as operator
  - Purchase equipment
- Post Processing
  - Outsource
  - Purchase software
  - Use open source software



Questions?